



**Clayton, Sr., P.E., Inc.**  
CIVIL & ENVIRONMENTAL ENGINEERING

Scanned by <i>Zinith Barbee</i>	Date 2/19/09	Doc ID # 6840
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## LETTER OF TRANSMITTAL

TO: NCDENR, Division of Waste Management
Zinith Barbee NCDENR DWM SWS 1646 Mail Service Center Raleigh, NC 27699



DATE: February 16, 2009	
PROJECT NO: 03	TASK NO: 002B
Re: Corrective Action Plan & Application Dunn-Erwin Landfill	
TRANSMITTAL NO: 1	PAGE 1 OF 1

WE ARE SENDING: ☐ Originals ☐ Prints ☐ Shop Drawings ☐ Samples  
☐ Specifications ☐ Calculations ☒ Other: See Below

Quantity	Drawing No.	Rev.	Description	Status
1			Corrective Action Plan Narrative and Drawings	F, H
1			Original CAP Application Form (copy in narrative)	F, H
1			Selection of Corrective Action Remedy (Revision) letter (copy in narrative)	F, H
1			Financial Assurance document (in Appendix of narrative)	F, H

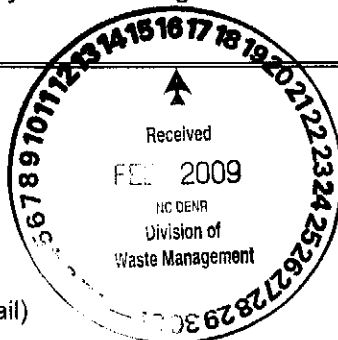
Issue Status Code: A. Preliminary B. Fabrication Only C. For Information D. Bid  
E. Construction F. For Review & Comments G. For Approval H. See Remarks

### REMARKS:

Zinith,

Please find attached the requested Corrective Action Plan and Application for the DELF facility. Feel free to call or email to discuss. Digital copy is also being submitted via email.

cc: Jerry Blanchard (via email)  
Geoff Little, SWS (via email)  
Mark Poindexter, SWS (via email)  
Ryan Sadler (via email)  
file



*C. Tyrus Clayton, Jr.*  
C. Tyrus Clayton, Jr., PE

P. O. Box 578, COATS, NC 27521 PHONE: 910 897-7070 FAX: 910 897-6767



Scott Sauer  
County Manager

William A. (Tony) Wilder  
Assistant County Manager

PO Box 759  
102 East Front Street  
Lillington, NC 27546

ph: 910-893-7555  
fax: 910-814-2662

February 12, 2009

Mr. Zinith Barbee, Hydrogeologist II  
Division of Waste Management – Solid Waste Section  
NC Department of Environment and Natural Resources  
1646 Mail Service Center  
Raleigh, NC 27699-1646

RE: Selection of Corrective Action Remedy (Revision to October 15, 2008 letter)  
Dunn-Erwin Landfill Facility  
SWS Permit No. 43-02  
Harnett County, NC

Dear Mr. Barbee,

This letter is to serve as the official notification of the revision of the selection of a Corrective Action Remedy and Technology to be utilized for remediation at the Dunn-Erwin Landfill Facility.

Per the meeting with the SWS on November 26, 2008, the previously selected Corrective Action Technology of Phytoremediation has been modified to also include Enhanced In-situ Bioremediation. The Enhanced In-situ Bioremediation will be utilized by injecting a remedial substrate within the 250-ft compliance buffer to the existing landfill to treat the contaminant release that has occurred. The Phytoremediation will be utilized to treat the contaminant groundwater plume that now exists outside the 250 foot compliance buffer and downgradient of the landfill, within the facility boundary.

A more detailed explanation of the Corrective Action Plan and the proposed implementation schedule can be reviewed in the Dunn-Erwin Landfill Corrective Action Plan document being prepared and submitted by our consultant, C. T. Clayton, Sr., PE, Inc.

Letter to Mr. Zinith Barbee, Hydrogeologist II

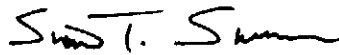
Regarding the Dunn-Erwin Landfill Facility, SWS Permit No. 43-02, Harnett County, NC

Page Two

February 12, 2009

Please feel free to contact Tyrus Clayton, PE of CTC directly at 910-897-7070 or [tyrus@ctclayton.com](mailto:tyrus@ctclayton.com) to discuss this issue further. Also, please copy him on any correspondence concerning solid waste permitting and compliance matters for Harnett County.

Sincerely,

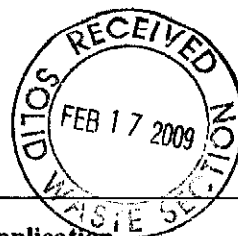


Scott Sauer, Manager  
Harnett County

cc: Jerry Blanchard, General Services Manager, Harnett County  
C. Tyrus Clayton, Jr., PE, C. T. Clayton, Sr., PE, Inc.  
Geoff Little, NCDENR-DWM-SWS  
Mark Poindexter, NCDENR-DWM-SWS



North Carolina Department of Environment and Natural Resources  
Division of Waste Management  
Solid Waste Section



**North Carolina Solid Waste Groundwater Corrective Action Permit Modification Application**

Pursuant to 15A NCAC 13B .1636, "Within 14 days of selecting a remedy, the permittee shall submit an application to modify the permit describing the selected remedy to the Division for evaluation and approval." The application shall include the demonstrations necessary to comply with the financial assurance requirements set forth in Paragraph (d) of Rule .1628.

Please attach the following: (1) a copy of the minutes from the public meeting discussing the Assessment of Corrective Measures, (2) a signed resolution/proclamation/document adopting the remedy, (3) a site map designating locations of groundwater monitoring wells and surface water monitoring locations that will be impacted by the remedy, (4) any draft conceptual schematics/figures/plans relating to the selected remedy, (5) a list of any required registrations, permits, and approvals, (6) a copy of most recent permit issued by the Solid Waste Section, and (7) an amendment to the Financial Assurance Mechanism, including a break-down of the cost estimates for closure, post-closure and corrective action.

Send the application and attachments to NCDENR-DWM, Solid Waste Section, Compliance Unit, 1646 Mail Service Center, Raleigh, NC 27699-1646. This application and any documents attached to this application are "Public Records" as defined in NC General Statute 132-1. As such, these documents are available for inspection and examination by any person upon request (NC General Statute 132-6).

Please type or print all information legibly.

**I. Site Identification**

Permit Number: 43-02

Solid Waste Rule Designation (.0500 or .1600): .0500

Facility Name: Dunn-Erwin C&D Landfill

Facility Physical Address: 449 Daniels Road

City: Dunn

Zip: 28334

County: Harnett

Waste Type: Construction and Demolition (C&D)

**II. Owner and Operator Information**

☒ Check box, if owner and operator are the same.

**Owner**

Name: Harnett County

Address: PO Box 940 Lillington, NC 27546

Phone Number: 910-893-7536

**Operator**

Name:

Address:

Phone Number:

### III. Groundwater Corrective Action

Selected remedy (include addition lines if needed):

(1) Enhanced Bioremediation Barrier Wall

(2) Phytoremediation

(3)

Contingency Plan A: Reinjection of enhanced bioremediation substrate

Contingency Plan B: Pump and Treat

### IV. Financial Assurance

Financial Assurance Mechanism: Government Financial Test

Total Cost Estimate for 30 Years (based upon ACM): \$ 1,300,000.00

### V. Project Schedule (upon Division approval)

Approximate Date of Remedy Construction Completion (if applicable): Approximately 4 years from start.

Approximate Date of Implementation of Remedy: 2/16/2010 or approximately one year from approval.

Approximate Date of Baseline Sampling Completion (if applicable): 6/1/2009 or within two months of approval.

Approximate Date of First Remedy Performance and Effectiveness Report Submittal: 6/1/2010 Approximately

See attached  
Diagram

### VI. Environmental Consultant

Consulting Company: C.T. Clayton, Sr., P.E., Inc.

Address: PO BOX 578 Coats, NC 27521

Phone Number: 910-897-7070

## VII. Signatures

To the best of my knowledge, the information reported and statements made in this North Carolina Solid Waste Groundwater Corrective Action Permit Modification Application are true and correct. I am aware that there are significant penalties for making any false statement, representation, or certification including the possibility of fine and imprisonment.

If Owner and Operator are the same, please sign for Owner and type or write SAME for Operator.

### Owner

Owner Name (Printed or Typed): County of Harnett

Owner Signature: Jerry Blanchard GENERAL SERVICES Director Date: 2/10/09

### Operator

Operator Name (Printed or Typed): County of Harnett

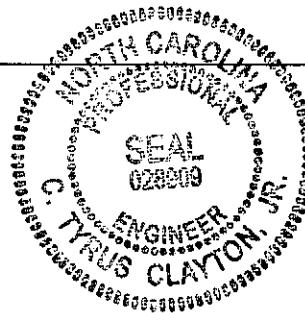
Operator Signature: Same as above Date: 2/10/09

### NC Professional Geologist or NC Professional Engineer

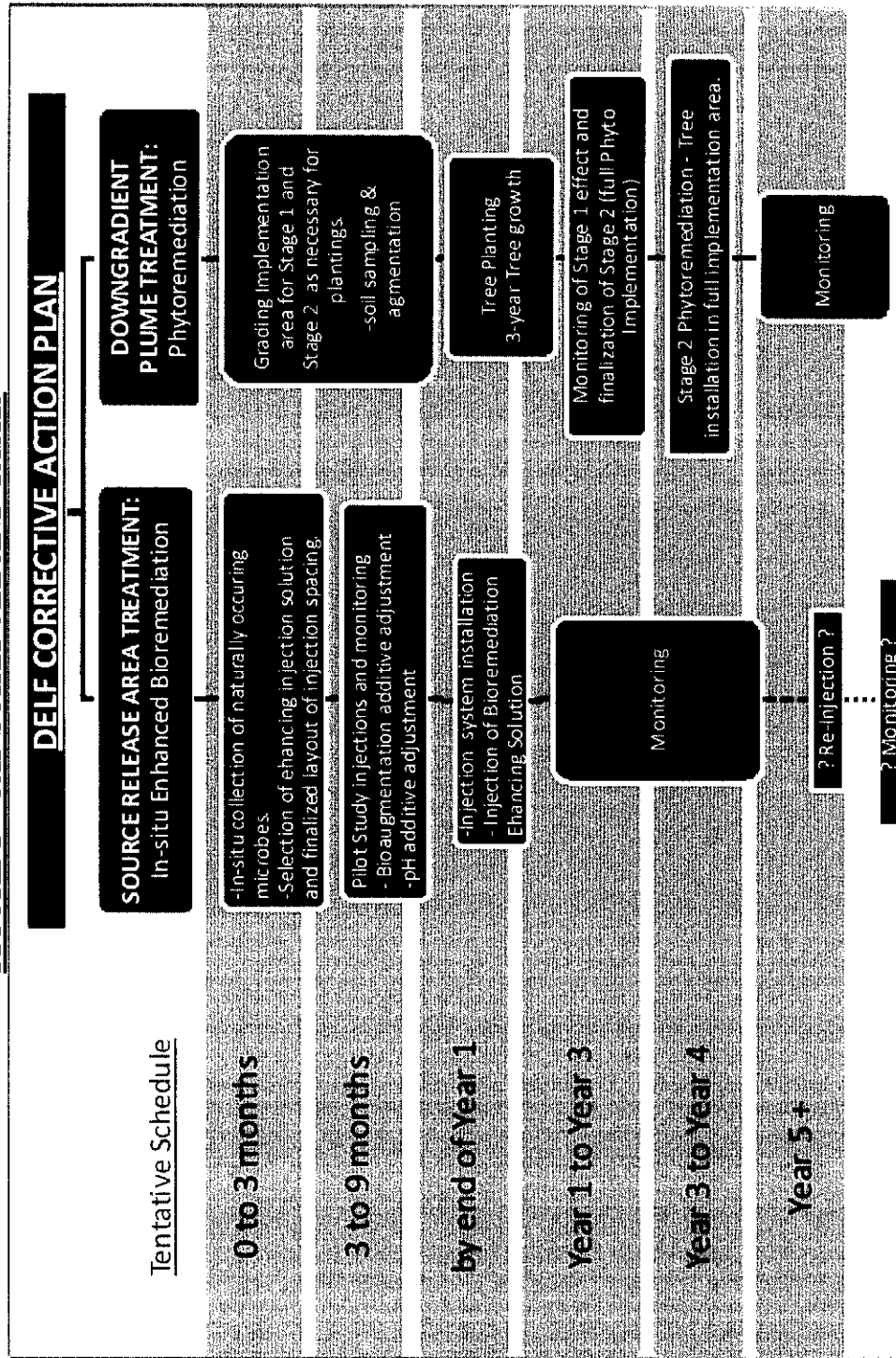
Name (Printed or Typed): C. Tyrus Clayton, Jr.

Signature: C. Tyrus Clayton Jr. Date: 2/16/09

Affix NC Professional Geologist/Engineer Seal:



**FIGURE 1 – CAP SCHEDULE AND TASKS**



- NOTES:** 1. The schedule above is assumed to begin after the CAP depicted in this document is approved in full by the NCDENR-SWS.  
2. The schedule show above for Phytoremediation is subject to be shifted so that planting of trees occurs during the period of the year that best facilitates survival of the trees.

# CORRECTIVE ACTION PLAN

**December 2008**  
**Revised February 2009**



Prepared for:

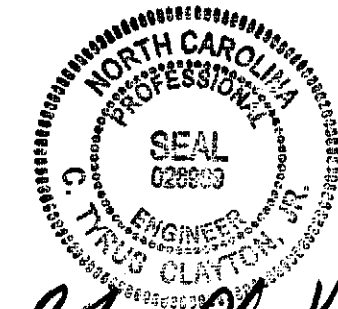
**HARNETT COUNTY, NORTH CAROLINA**

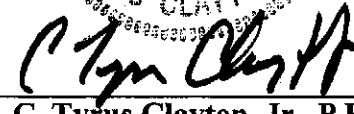
Prepared by:

**C.T. CLAYTON SR., P.E., Inc.**  
CTC PN# 03002B

The following Corrective Action Plan was prepared in accordance with NC Solid Waste Management Rules (NCSWMR) 15A NCAC 13 B .1636.

  
Ryan Sadler  
Project Manager



 2/16/09  
C. Tyrus Clayton, Jr., P.E.  
Vice President